**ZRD1/CCD1 Response Form**

**Location Information (To be completed by a Buildings Department official if applicable)**

<table>
<thead>
<tr>
<th>House No(s)</th>
<th>Amsterdam Avenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-208</td>
<td></td>
</tr>
</tbody>
</table>

| Borough      | Manhattan       
|--------------|----------------|

<table>
<thead>
<tr>
<th>Block</th>
<th>Lot</th>
<th>BIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1158</td>
<td>133</td>
<td>1030358</td>
</tr>
</tbody>
</table>

**DETERMINATION (To be completed by a Buildings Department official)**

<table>
<thead>
<tr>
<th>Request has been:</th>
<th>□ Approved</th>
<th>□ Denied</th>
<th>□ Approved with conditions</th>
</tr>
</thead>
</table>

Follow-up appointment required? | □ Yes | □ No |

Primary Zoning Resolution or Code Section(s):

Other secondary Zoning Resolution or Code Section(s):

Comments:

CONTROL# 44647

APPROVED WITH CONDITIONS:

Applicants request to utilise a light and air easement at the south and west facades to provide for supply and exhaust uses at the lower floors is hereby approved as follows:

i) Proposed mechanical design shall comply with 2014 MC.

ii) The existing light and air easement shall be modified to clearly authorize the proposed use.

iii) The proposed easement shall be text of the approved by the department prior to execution and registration.

iv) The measurement for distance between outlet/inlet terminations of supply and exhaust be measured to the easement boundary opposite the wall of inlet/outlet termination.

Note: If approved determination is not scanned or microfilmed, it will be deemed invalid.

Name of Authorized Reviewer (please print): MARTIN REBHOLZ, RA

Title (please print): MANHATTAN BOROUGH COMMISSIONER

Authorized Signature: [Signature]

Date: 10-04-2016

Note: Determination will expire if construction document approval is not obtained within 12 months of issuance.

RODNEY GITTENS, R.A.
Deputy Borough Commissioner
---

### Location Information

- **House No(s)**: 200-208
- **Street Name**: AMSTERDAM AVENUE
- **Borough**: Manhattan
- **Block**: 1158
- **Lot**: 133
- **BIN**: 1030358
- **CB No**: 107

---

### Applicant Information

- **Last Name**: MCHUGH
- **First Name**: CHRISTOPHER
- **Business Name**: AKF ENGINEERING
- **Business Telephone**: (212) 354-5656
- **Business Address**: ONE LIBERTY PLAZA, 165 BROADWAY 22ND FLOOR
- **City**: NEW YORK
- **State**: NY
- **Zip**: 10006
- **E-Mail**: CMCHUGH@AKFGROUP.COM
- **License Number**: 073130

---

### Attendee Information

- **Last Name**: JACKIER
- **First Name**: PHILLIP
- **Business Name**: GILLMAN CONSULTING INC
- **Business Address**: 40 WORTH ST SUITE 600
- **City**: NEW YORK
- **State**: NY
- **Zip**: 10013
- **Business Telephone**: (212) 349-9304
- **Business Fax**: (212) 349-9346
- **Mobile Telephone**: (917) 715-6254
- **E-Mail**: PHILLIP@GILLMANINC.COM
- **License**: 022203

---

### Nature of Request

- **Job Number**: (provide below)
- **Document Number**: (provide below)
- **Examiner**: (provide below)
- **Construction Code (if applicable)**: 2014 Code
- **MC 401.4 Intake opening location**
- **MC 404 Enclosed parking garage**
- **MC 501 2.1 Location of exhaust outlets**
- **MC 811.2 Generator discharge opening termination requirements**

---

**Reference #**

- **Appointment date**:
- **Appointment time**: 10/4/16
- **Comments**:
- **Reviewed By**: (provide below)
- **Date**: 10/4/16
- **Time**: 10/4/16

---

**NYC Buildings**

**CCD1: Construction Code Determination Form**

**Must be typewritten**

---

**Notes**:

1. **Location Information Required for all requests on filed applications.**
2. **Applicant Information Required for all requests on filed applications.**
3. **Attendee Information Required if different from Applicant in section 2 or no Applicant.**
4. **Nature of Request Required for all requests. Only one request may be submitted per form.**
   - **Job associated with this request?** Yes (provide job/document examiner name below) No
   - **Has this request been previously denied?** Yes (attach all denied request form(s) and attachment(s)) No
   - **Indicate total number of pages submitted with this request, including attachments.**
   - **Construction Code (if applicable)**: 2014 Code
   - **MC 401.4 Intake opening location**
   - **MC 404 Enclosed parking garage**
   - **MC 501 2.1 Location of exhaust outlets**
   - **MC 811.2 Generator discharge opening termination requirements**

---

**Administrative Use Only**

- **Reference #**: (provide below)
- **Appointment date**: (provide below)
- **Appointment time**: (provide below)
- **Comment**: (provide below)
- **Reviewed By**: (provide below)
- **Date**: 10/4/16
- **Time**: (provide below)

---
This is a request for:

☐ Interpretation or clarification

☐ Variation of Building Code or Rules per § 28-103 3 (please state in detail the practical difficulty that is specific to this project, and provide the analysis as to equally safe alternative, as per NYC Charter Section 645(b)(2))

☐ Variation of Multiple Dwelling Law (MDL) § 277 16 for Article 7B Buildings (please state in detail the practical difficulty that is specific to this project and provide the analysis as to equally safe alternative, as per NYC Charter Section 645(b)(2))

Note: Variations of any other MDL provisions must be filed with the Board of Standards and Appeals (BSA) per MDL § 310.

Please itemize all attachments, including plans/sketches, submitted with this form. If this is based on a plan examiner objection, type in the applicable objection text exactly as it appears on the objection sheet.

Pre-determination is respectfully requested to direct intake and exhaust air across a building tax lot line when there exists a "light and air" easement [see attached].

This proposed new building will be a residential [R-2] structure with accessory amenities at the lower floors. The building will be located at the northwest corner of West 69th Street and Amsterdam Avenue. The site is subject to a number of constraints including 'light and air easements' on the south and west lot lines, an existing adjacent building on the parcel to the north, and building walls proposed at the lot lines on the East, South and West facades. Additionally, due to the site fronting a single street, all utilities and POE's must enter the building from Amsterdam Avenue.

Accessory amenities are proposed in the below grade floors including an enclosed parking facility, a swimming pool and a fitness center, all requiring fresh air intake and exhaust air. It is also proposed to locate the emergency generator within these lower levels.

The Amsterdam Avenue frontage is not a viable location for the fresh air intake and exhaust due to the utility POE rooms below grade and the building entrance at street level, leaving only the south and west facades as viable alternatives. It is therefore proposed to utilize the existing "light and air" easement at the south and west facades to exhaust air for the uses at the lower floors. Intake ducts will contain fire / smoke dampers as per NYC Code requirements.

The following 2014 Mechanical Code sections apply to the intake air and exhaust air for the proposed uses at the lower floors [see attached]:

Exhaust
1. Parking garage: MC 501.2.1 - item 1 - 10 feet from property lines, 10 feet above grade
2. Environmental exhausts (spill air from HVAC systems, ventilation exhaust from generator): MC 501.2.1 - item 3 - 3 feet from property lines and 10 feet from intakes.
3. Exhaust can not be directed onto public walkways MC 501 2.1.1.
4. Generator products of combustion exhaust (flue) - MC 811.2 - exhaust is to be directed to not jeopardize health and safety of people.

Ventilation air intake
1. MC 401.4 - intakes located 10 feet from property lines

The 30 foot wide "light and air easement" [see attached] on the south and west facades create the parameters that will provide the required separation between buildings and exhaust meeting the intent and provisions of the Code.

Note: Buildings Department Determination will be issued on the CCD1 Response Form

Reviewed By: _______________________________ Date: 10/14/16 Time: __________________

ADMINISTRATIVE USE ONLY

12/14
Note: Buildings Department Determination will be issued on the CCD1 Response Form

I hereby state that all of the above information is correct and complete to the best of my knowledge. Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both. It is unlawful to give to a City employee, or for a City employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine, or both.

Reviewed By: [Signature]
Date: 10/4/16
Time: 12/14
NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

This page is part of the instrument. The City Register will rely on the information provided by you on this page for purposes of indexing this instrument. The information on this page will control for indexing purposes in the event of any conflict with the rest of the document.

2014123001316001003EA56D

RECORDING AND ENDORSEMENT COVER PAGE

Page 1 of 10

Document ID: 2014123001316001
Document Date: 12-19-2014
Preparation Date: 02-02-2015

Document Type: EASEMENT
Document Page Count: 8

PRESENTER:
TITLEVEST AGENCY
44 WALL STREET/ DR-NY-440023
10TH FLOOR
NEW YORK, NY 10005
212-757-5800
RECORDINGS@TITLEVEST.COM

RETURN TO:
TITLEVEST AGENCY
44 WALL STREET/ DR-NY-440023
10TH FLOOR
NEW YORK, NY 10005
212-757-5800
RECORDINGS@TITLEVEST.COM

PROPERTY DATA

Borough Block Lot Unit Address
MANHATTAN 1158 1405 Entire Lot 1405 170 WEST END AVENUE

Property Type: SINGLE RESIDENTIAL COOP UNIT

Borough Block Lot Unit Address
MANHATTAN 1158 1401 Entire Lot 1401 170 WEST END AVENUE

Property Type: COMMERCIAL REAL ESTATE

CROSS REFERENCE DATA

CRFN ______ or DocumentID _____ or ______ Year ______ Reel _____ Page _____ or File Number______

GRANTOR/SELLER:
BOARD OF MANAGERS OF THE 170 WEST END AVENUE CONDO
170 WEST END AVENUE
NEW YORK, NY 10023

GRANTEE/BUYER:
ACP AMSTERDAM III LLC
460 PARK AVENUE, 11TH FLOOR, C/O AMERICAN CONTINENTAL PROPERTIES LLC
NEW YORK, NY 10022

FEES AND TAXES

Mortgage:
Mortgage Amount: $ 0.00
Taxable Mortgage Amount: $ 0.00
Exemption:
TAXES:
County (Basic): $ 0.00
City (Additional): $ 0.00
Spec (Additional): $ 0.00
TASA: $ 0.00
MTA: $ 0.00
NYCTA: $ 0.00
Additional MRT: $ 0.00
TOTAL: $ 0.00

Recording Fee: $ 89.00
Affidavit Fee: $ 0.00

NYC Real Property Transfer Tax: $ 0.00
NYS Real Estate Transfer Tax: $ 0.00

RECORDED OR FILED IN THE OFFICE OF THE CITY REGISTER OF THE CITY OF NEW YORK
Recorded Filed 02-06-2015 10:22
City Register File No. (CRFN): 2015000041853

City Register Official Signature

City Register Official Signature
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<th>Lot</th>
<th>Unit</th>
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<tbody>
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<td>1158</td>
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<td>1402</td>
<td>170 WEST END AVENUE</td>
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<td></td>
<td>Property Type: COMMERCIAL REAL ESTATE</td>
</tr>
</tbody>
</table>
LIGHT AND AIR EASEMENT AGREEMENT

EASEMENT AGREEMENT made this 13th day of December, 2014, between the Board of Managers of The 170 West End Avenue Condominium (the “Condominium”), on behalf of all Condominium unit owners (the “Unit Owners”), hereinafter referred to as the “Grantor,” having an office at 170 West End Avenue, New York, NY and ACP AMSTERDAM III, LLC hereinafter referred to as the “Grantee,” having an office at c/o American Continental Properties, LLC., 460 Park Avenue, 11th floor, New York, NY 10022.

WHEREAS, the Grantor is the authorized agent of the Unit Owners, the fee owners of certain land located in the City and State of New York, Borough of Manhattan, designated as Block 1158, Lots 1401 through 1404 (for the professional units of the Condominium) and Lot 1405 (for the residential unit of the Condominium), bk/a lot 30 on the Tax Map of the City of New York, hereinafter referred to as Parcel A and more particularly described by a metes and bounds description set forth in Schedule A annexed hereto and by this reference made a part hereof;

WHEREAS, the Grantee is the fee owner of certain land located in the City and State of New York, Borough of Manhattan, designated as Block 1158, Lots 133 and 134 on the Tax Map of the City of New York, hereinafter referred to as Parcel B and more particularly described by a metes and bounds description set forth in Schedule B annexed hereto and by this reference made a part hereof;

WHEREAS, there will be constructed a multistory building on Parcel B;

WHEREAS, Grantee will request the New York City Department of Buildings (the “Department of Buildings”) to act upon Application No. ____________________________ to construct a new building for mixed commercial and residential use on Parcel B; and

WHEREAS, the Department of Buildings may approve the Application upon the condition, inter alia, that Grantor create an easement for light and air for the benefit of the present and future owners of Parcel B in order to comply with the applicable provisions of Sections 27-732 and 27-746 of the 1968 Building Code or Sections BC 1203.4 and BC 1205.2 of the 2008 Building Code, as applicable.

NOW, THEREFORE, good and valuable consideration having been paid, the Grantor, as agent and on behalf of the Unit Owners and their respective legal representatives, successors and assigns hereby makes the following grant to Grantee, its legal representatives, successors, and assigns and to any future owner of Parcel B:

1. The right to unrestricted light and air over the portion of Parcel A that is more particularly described by the metes and bounds description set forth in Schedule C, annexed hereto and, by this reference, fully incorporated herein, such that any construction on such portion of Parcel A shall never infringe upon the light and air provided to Parcel B. The foregoing right is, however, subject to the terms set forth in Schedule C.
2. This easement agreement may not be modified, amended or terminated without the prior written consent of the Department of Buildings.

3. The covenants set forth herein shall run with the land and be binding upon and inure to the benefit of the parties hereto and their respective heirs, legal representatives, successors and assigns.

4. Failure to comply with the terms of this easement agreement may result in the revocation of a building permit or certificate of occupancy.

5. This easement agreement shall be recorded at the city register's (county clerk's) office against all affected parcels of land and the cross-reference number and title of the easement agreement shall be recorded on each temporary and permanent certificate of occupancy hereafter issued to buildings located on the affected parcels and in any deed for the conveyance thereof.

IN WITNESS WHEREOF, the parties have made and executed the foregoing easement agreement as of the date hereinabove written.

Grantor:
Board of Managers of The 170 West End Avenue Condominium
(on behalf of all Unit Owners)

By: __________________________
Name: Robert Sasin
Title: President

Grantee:
ACP AMSTERDAM III, LLC
By: ACP Amsterdam Development, L.L.C.
By: LTG West End Corp., (its Manager)

By: __________________________
Name: Barbara B. Dalt
Title: Managing Director
STATE OF NEW YORK  

COUNTY OF NEW YORK  

On the 22nd day of December, in the year 2014, before me, the undersigned personally appeared familiar with Robert J. Gal, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

MARGARET CHAN  
Notary Public, State of New York  
No. 01-CH6116528  
Qualified in Queens County  
Commission Expires October 12, 2016

MARGARET CHAN  
Notary Public, State of New York  
No. 01-CH6116528  
Qualified in Queens County  
Commission Expires October 12, 2016

STATE OF NEW YORK  

COUNTY OF NEW YORK  

On the 16th day of December, in the year 2014, before me, the undersigned personally appeared familiar with Barbara B. Daly, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

MARGIE LEE  
Notary Public, State of New York  
No. 01-LE5052439  
Qualified in Kings County  
Commission Expires Nov. 27, 2017
SCHEDULE A

PARCEL A

ALL that certain plot, piece or parcel of land, situate, lying and being in the Borough of Manhattan, City, County and State of New York, bounded and described as follows:

BEGINNING at a point on the westerly side of Amsterdam Avenue, 100 feet wide, distant 220 feet 10 inches southerly from the corner formed by the intersection of the westerly side of Amsterdam Avenue with the southerly side of West 70th Street, 60 feet wide;

RUNNING THEREFROM southerly along the westerly side of Amsterdam Avenue, 65 feet;

THENCE westerly at right angles to Amsterdam Avenue, 80 feet;

THENCE southerly parallel with Amsterdam Avenue, 50 feet;

THENCE westerly at right angles to the preceding course 20 feet to a point on a line 100 feet westerly from and parallel with Amsterdam Avenue;

THENCE southerly along said parallel line, 190 feet 4 inches;

THENCE westerly at right angles to the preceding course, 364 feet 4 inches;

THENCE northerly parallel with West End Avenue, 39 feet 4 inches;

THENCE westerly at right angles to West End Avenue 335 feet 8 inches to a point on the easterly side of West End Avenue;

THENCE northerly along the easterly side of West End Avenue, 15 feet;

THENCE easterly at right angles to West End Avenue, 335 feet 8 inches;

THENCE northerly parallel with West End Avenue 259 feet to a point on a line distance 200 feet 10 inches southerly from and parallel with the southerly side of West 70th Street, 80 feet wide;

THENCE easterly along said parallel line 309 feet 4 inches;
THENCE northerly at right angles to the preceding course, 120 feet 5 inches to a point on a line 100 feet 5 inches southerly from and parallel with West 70th Street 60 feet wide;

THENCE easterly along said parallel with Amsterdam Avenue, 120 feet 5 inches;

THENCE easterly at right angles to Amsterdam Avenue, 100 feet to the point or place of BEGINNING.
SCHEDULE B
PARCEL B

Lot 133:
All that certain lot, piece or parcel of land, situate, lying and being in the borough of Manhattan, City, County and State of New York, bounded and described as follows:

BEGINNING at a point on the westerly side of Amsterdam Avenue, distant 100 feet 5 inches from the corner formed by the intersection of the westerly side of Amsterdam Avenue, and the southerly side of West 70th Street;

Running thence westerly parallel with West 70th Street, 100 feet;

Thence southerly parallel with Amsterdam Avenue, 50 feet;

Thence easterly parallel with West 70th Street, 100 feet to the westerly side of Amsterdam Avenue; and

Thence northerly along the westerly side of Amsterdam Avenue, 50 feet to the point or place of the BEGINNING.

Lot 134:
All that certain lot, piece or parcel of land, situate, lying and being in the borough of Manhattan, City, County and State of New York, bounded and described as follows:

BEGINNING at a point on the westerly side of Amsterdam Avenue, distant 150 feet 5 inches from the corner formed by the intersection of the westerly side of Amsterdam Avenue, and the southerly side of West 70th Street;

Running thence westerly parallel with West 70th Street, 100 feet;

Thence southerly parallel with Amsterdam Avenue, 70 feet 5 inches;

Thence easterly parallel with West 70th Street, 100 feet to the westerly side of Amsterdam Avenue; and

Thence northerly along the westerly side of Amsterdam Avenue, 70 feet 5 inches to the point or place of the BEGINNING.
SCHEDULE C
PORTION OF PARCEL A

All that portion of a certain lot, piece or parcel of land, situate and being in the Borough of Manhattan, City, County and State of New York, which lies above a horizontal plane, the elevation of which is twelve (12) feet above grade (78.46 feet above the North American Vertical Datum of 1988 (NAVD88), established by the National Geodetic Survey; the "Horizontal Plane"), and which is bounded and lies within the vertical planes described as follows:

BEGINNING at a point in the westerly line of Amsterdam Ave distant 712'-6" northerly from the corner formed by the intersection of the westerly line of Amsterdam Ave with the northerly line of West 66th Street;

Running thence northerly, along the westerly line of Amsterdam Avenue, 30'-0";
Thence westerly, parallel with the northerly line of West 66th Street, 100'-0";
Thence northerly, parallel with the westerly line of Amsterdam Avenue, 120'-5";
Thence westerly, parallel with the northerly line of West 66th Street, 30'-0";
Thence southerly, parallel with the westerly line of Amsterdam Avenue, 120'-5";
Thence easterly, parallel with the northerly line of West 66th Street, 30'-0";
Thence southerly, parallel with the westerly line of Amsterdam Avenue, 30'-0";
Thence easterly, parallel with the northerly line of West 66th Street, 100'-0"; to the point or place of BEGINNING.

No buildings or improvements shall be constructed or allowed to exist below the Horizontal Plane except roads, paths, parking areas or other surface only type improvements.
CHAPTER 4
VENTILATION

SECTION MC 401
GENERAL

401.1 Scope. This chapter shall govern the ventilation of spaces within a building intended to be occupied. Mechanical exhaust systems, including exhaust systems serving clothes dryers and cooking appliances; hazardous exhaust systems; dust, smoke and refuse conveyor systems; subslab exhaust systems; smoke control systems; energy recovery ventilation systems and other systems specified in Section 502 shall comply with Chapter 5.

401.2 Ventilation required. Every occupiable space shall be ventilated by natural means in accordance with Section 402 or by mechanical means in accordance with Section 403.

Every habitable space shall be ventilated by natural means in accordance with Section 402 and, if required by Table 403.3, by mechanical means in accordance with Section 403.

401.3 When required. Ventilation shall be provided during the periods that the room or space is occupied.

401.4 Intake openings: Location. Air intake openings shall comply with the following:

1. Intake openings shall be located a minimum of 10 feet (3048 mm) from lot lines or buildings on the same lot. For buildings on lots measuring less than 20 feet (6096 mm) in width, intake openings shall be located at the centerline between lot lines. Where openings front on a street or public way, the distance shall be measured to the centerline of the street or public way.

2. Outdoor intakes for high-rise office buildings having occupied floors located more than 75 feet (22 900 mm) above the lowest level of fire department vehicle access serving spaces above the second story and serving spaces greater than 10,000 square feet (929 m²) of floor area shall be located at least 20 feet (6096 mm) above ground level, at least 30 feet (9144 mm) from exhaust outlets and other exhaust discharges, and at least 20 feet (6096 mm) from areas that may collect vehicular exhaust, such as off street loading bays.

3. Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet (3048 mm) horizontally from any hazardous or noxious contaminant source, such as vents, exhausts (including but not limited to exhaust from dry cleaning establishments, spray booths, and cooling towers), streets, alleys, parking lots and loading docks, except as specified in Item 3 of Section 501.2.1.

4. Where the requirements of Item 3 above cannot be achieved, intake openings shall be located not less than 3 feet (914 mm) below contaminant sources where such sources are located within 10 feet (3048 mm) of the opening.

5. Intake openings in Group 1 occupancies shall comply with ANSI/ASHRAE/ASME 170, as required.

6. Intake openings on structures in flood hazard areas shall comply with Appendix G of the New York City Building Code.

Exception: Group R-3 occupancies are not required to comply with Section 401.4.

401.4.1 Required dampers in intake openings. An outdoor air intake opening with gross area of more than 144 square inches (0.929 m²) shall be provided with fire dampers and smoke dampers, or combined fire and smoke dampers, when such opening is located as follows:

1. Less than 30 feet (9144 mm) above grade.

2. Less than 60 feet (18288 mm) in any direction from any opening in another building.

3. Less than 15 feet (4572 mm) from a lot line.

4. Less than 50 feet (15 240 mm) above and less than 50 feet (15 240 mm) in any direction from a roof constructed of combustible material or a building in which the exterior walls are constructed wholly or partly of wood.

5. Where fire dampers are required by Section 407.5.6. Exceptions:

1. Smoke dampers shall not be required for outdoor air intake openings installed in any construction required to have a fire resistance rating that is less than 2 hours.

2. Smoke dampers shall not be required for outdoor air intake openings of systems greater than 15,000 cfm (7.1 m³/s) which are provided with smoke dampers in accordance with Chapter 6 of this code and arranged so as to not introduce smoke into the building or space into which the equipment is located.

401.5 Intake opening protection. Air intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles. Openings in louvers, grilles and screens shall be sized in accordance with Table 401.5, and shall be protected against local weather conditions. Outdoor air intake openings located in exterior walls shall meet the provisions for exterior wall opening protectives in accordance with the New York City Building Code.
VENTILATION

where:

\[ P = \text{System population: The total number of occupants in the area served by the system.} \]

For design purposes: \( P \) shall be the maximum number of occupants expected to be concurrently in all zones served by the system.

403.3.2.3.4 Outdoor air Intake flow rate. The outdoor air intake flow rate \((V_o)\) shall be determined in accordance with Equation 4-8.

\[ V_o = \frac{V_{b}}{T_e} \quad \text{(Equation 4-8)} \]

403.4 Short-term conditions. If it is known that peak occupancy will be of short duration and/or ventilation will be varied or interrupted for a short period of time, the design may be based on the average conditions over a time period, \( T \), determined by Equation 4-9.

\[ T = \frac{3wV_{b}}{P} \quad \text{(Equation 4-9) (US)} \]

\[ T = \frac{50wV_{b}}{P} \quad \text{(Equation 4-9) (SI)} \]

when:

\( T = \text{average time period, minutes} \)

\( V = \text{the volume of the zone of which averaging is being applied, cubic feet} \)

\( V_b = \text{the breathing zone outdoor airflow calculated using Equation 4-1 and design value of the zone population} \)

\( P = \text{the maximum number of occupants expected to be concurrently in all zones served by the system} \)

Acceptable design adjustments based on this optional provision include the following:

1. Zone with fluctuating occupancy: the zone population \((P)\) may be averaged over time, \( T \).

2. Zone with intermittent interruption of supply air: the average outdoor airflow supplied to breathing zone over time, \( T \), shall be no less than the breathing zone outdoor airflow \((V_b)\) calculated using Equation 4-1.

3. A system with intermittent closure of outdoor intake: the average outdoor air intake over time, \( T \).

4. \( T \) shall be no less than the minimum outdoor air intake \((V_{b})\) calculated using Equation 2-4.3, 4-4 or 4-8, as appropriate.

403.5 Exhaust ventilation. Exhaust airflow rate shall be provided in accordance with the requirements in Table 403.3. Exhaust makeup air shall be permitted to be any combination of outdoor air, recirculated air and transfer air, except as limited in accordance with Section 403.2

403.6 System operation. The minimum flow rate of outdoor air that the ventilation system must be capable of supplying during its operation shall be permitted to be based on the rate per person indicated in Table 403.3 and the actual number of occupants present.

403.7 Variable air volume system control. Variable air volume air distribution systems, other than those designed to supply only 100-percent outdoor air, shall be provided with controls to regulate the flow of outdoor air. Such control system shall be designed to maintain the flow rate of outdoor air at a rate of not less than that required by Section 403.3 over the entire range of supply air operating rates.

403.8 Balancing. The ventilation air distributing system shall be provided with means to adjust the system to achieve at least the minimum ventilation airflow rate as required by Sections 403.3 and 403.4. Ventilation systems shall be balanced by an approved method. Such balancing shall verify that the ventilation system is capable of supplying and exhausting the airflow rates required by Sections 403.3 and 403.4.

SECTION MC 404
ENCLOSED PARKING GARAGES

404.1 Enclosed parking garages. Mechanical ventilation systems for enclosed parking garages shall be permitted to operate intermittently where the system is arranged to operate automatically upon detection of a concentration of carbon monoxide of 25 parts per million (ppm) by approved automatic detection devices.

404.2 Minimum ventilation. Automatic operation of the system shall not reduce the ventilation airflow rate below 0.05 cfm per square foot (0.00025 m³/s · m²) of the floor area and the system shall be capable of producing a ventilation airflow rate of 0.75 cfm per square foot (0.0038 m³/s · m²) of floor area.

404.3 Occupied spaces accessory to public garages. Connecting offices, waiting rooms, ticket booths and similar uses that are accessory to a public garage shall be maintained at a positive pressure and shall be provided with ventilation in accordance with Section 403.3.

SECTION MC 405
SYSTEMS CONTROL

405.1 General. Mechanical ventilation systems shall be provided with manual or automatic controls that will operate such systems whenever the spaces are occupied. Air-conditioning systems that supply required ventilation air shall be provided with controls designed to automatically maintain the required outdoor air supply rate during occupancy.

405.2 Manual control. Each air distribution system shall be provided with not less than one manual control to stop the operation of the supply, return, and exhaust fans(s) in an emergency. The manual control shall be provided at an approved location. A disconnect switch shall not be considered a manual control.

405.2.1 Office buildings. Any building where the main use or dominant occupancy is classified in Occupancy Group B having occupied floors located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access, where a system serves a floor or floors other than the floor on which the equipment is located, shall be provided with the following controls, in addition to the controls required by this chapter:

1. Manual controls for operating individually each air supply and each exhaust or return fan in the system located as follows:
CHAPTER 5
EXHAUST SYSTEMS

SECTION MC 501
GENERAL
501.1 Scope. This chapter shall govern the design, construction and installation of mechanical exhaust systems, including exhaust systems serving clothes dryers and cooking appliances; hazardous exhaust systems; dust, stock and refuse conveyor systems; subslab soil exhaust systems; smoke control systems; energy recovery ventilation systems; and other systems specified in Section 502.

501.2 Exhaust discharge. The air removed by every mechanical exhaust system shall be discharged outdoors at a point where it will not cause a nuisance and the air shaft will be located not less than the distances specified in Section 501.2.1. The air shall be discharged to a location from which it cannot again be readily drawn in by a ventilating system.

Air shall not be exhausted into an attic or crawl space.

Exceptions:

1. Whole-house ventilation-type attic fans shall be permitted to discharge into the attic space of dwelling units having private attics.

2. Commercial cooking recirculating systems.

501.2.1 Location of exhaust outlets. The termination point of exhaust outlets and ducts discharging to the outdoors shall be located within the following minimum distances:

1. For ducts conveying noxious, toxic, explosive or flammable vapors, fumes or dusts (including but not limited to exhaust from dry cleaning establishments and spray booths): 30 feet (914 mm) from property lines; 10 feet (3048 mm) from operable openings into buildings; 6 feet (1829 mm) from exterior walls and roofs; 30 feet (914 mm) from combustible walls and operable openings into buildings which are in the direction of the exhaust discharge; 10 feet (3048 mm) above adjoining grade. Additional requirements may apply to Hazardous Exhaust Systems; see Section 510.

2. For other product-conveying outlets: 10 feet (3048 mm) from the property lines; 3 feet (914 mm) from exterior walls and roofs; 10 feet (3048 mm) from operable openings into buildings; 10 feet (3048 mm) above adjoining grade; 10 feet from any exterior fire escape, stair, or balcony.

3. For all environmental air exhaust outlets: 3 feet (914 mm) from property lines; 3 feet (914 mm) from operable openings into buildings for all occupancies other than Group U, and 10 feet (3048 mm) from mechanical air intakes. Such exhaust outlets shall not be considered hazardous or noxious.

4. Exhaust outlets and openings serving structures in flood hazard areas shall be installed in accordance with Appendix G of the New York City Building Code.

5. For specific systems see the following sections:

5.1. Clothes dryer exhaust, Section 504.4.

5.2. Kitchen hoods and other kitchen exhaust equipment, Sections 506.3.12, 506.4 and 506.5.

5.3. Dust stock and refuse conveying systems, Section 511.

5.4. Subslab soil exhaust systems, Section 512.4.

5.5. Smoke control systems, Section 513.10.3

5.6. Refrigerant discharge, Section 1105.7.

5.7. Machinery room discharge, Section 1105.6.1.

6. In Occupancy Groups R-2 and R-3 each dwelling unit may be individually exhausted directly to the outdoors with a dedicated exhaust fan and shall comply with the following:

6.1. The exhaust system for the kitchen and the toilet/bath may be connected to the inlet of a continuously operated single fan, provided such exhaust system serves only one dwelling unit.

6.2. The dedicated exhaust from each dwelling unit shall be directed away from any window serving the same dwelling unit from which the exhaust is taken, and in addition, such exhaust opening shall terminate at least:

6.2.1. Two feet (610 mm) from any operational window or door serving the same dwelling unit.

6.2.2. Three feet (1219 mm) from any operational window or door serving another occupancy group in the same building.

6.2.3. Three feet (1219 mm) from any operational window or door serving another occupancy group in the same building.

6.2.4. Ten feet (3048 mm) from any outdoor air intake opening.

6.2.5. Ten feet (3048 mm) above the public sidewalk adjoining the same building.

6.2.6. All other minimum distances prescribed in Items 1 through 5 of Section 501.2.1 shall be satisfied.

501.2.1.1 Exhaust discharge. Exhaust air shall not be directed onto walkways.
SECTION MC 811
EXHAUST GASES FROM INTERNAL COMBUSTION ENGINES AND TURBINES

811.1 Exhaust pipe construction. The exhaust pipe from internal combustion engines shall be constructed in accordance with NFPA 211, NFPA 37, and based on the temperature of the gases entering the exhaust pipe, and in accordance with the following:

1. The exhaust pipe, if factory fabricated, shall be installed in accordance with its listing and manufacturer's instructions.

2. The exhaust pipe, if field fabricated, shall be constructed of at least 1/8-inch (3 mm) steel, or of other equivalent metal of similar strength and resistance to the temperature and corrosive action of the exhaust gases. No lining shall be required.

3. Where the exhaust pipe runs inside a building, it shall be insulated with insulation adequate for the temperature of the pipe, so that the surface temperature shall not be more than 200°F (93°C).

4. Where the exhaust pipe runs inside a building outside of the room containing the equipment, it shall be enclosed in fire-rated construction with a fire rating equal to the fire rating of the construction of the room.

5. All joints shall be constructed so as to be gastight under all operating conditions and tested in accordance with Section 810.

811.2 Emergency and standby generator discharge opening termination requirements. The location of discharge openings for emergency and standby internal combustion engines shall comply with the requirements of NFPA 37 so that the flue gases are not directed to jeopardize the health or safety of people, overheat combustible structures, nor enter building openings in the vicinity of the outlet, nor shall the location of such openings cause the condensate leaving the outlet to come into contact with people.

811.2.1 Interference. No discharge opening shall be located and constructed so as to interfere with the proper functioning of other openings in the same building or adjoining buildings, to interfere unreasonably with the occupants of the same building or adjoining buildings, or with the general public, or to create a fire or health hazard.

811.2.2 Chimneys. The exhaust pipe may be connected to a chimney used for other equipment, provided that the operation of the engine does not adversely affect the operation of the other equipment so that it is in violation of the New York City Air Pollution Control Code.